



# STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

*Jim Gibbons, Governor*

*Allen Biaggi, Director*

*Leo M. Drozdoff, P.E., Administrator*

## NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

### FACT SHEET

(pursuant to NAC 445A.236)

**Permittee Name:** Valley Heights, LLC  
5955 Edmond Street  
Las Vegas, NV 89118

**Permit Number:** NEV2001518

**Location:** Valley Heights Subdivision  
Corner of Whipple Avenue and Paiute Street  
Logandale, Clark County, Nevada  
Township 15S, Range 67E, Section 22

**Location of Rapid Infiltration Basins:**

Latitude: 36° 36' 45" N  
Longitude: 114° 28' 30" W

### **Wellhead Protection**

The Valley Heights Wastewater Treatment Facility (VHWWTF) is not located within an established wellhead protection capture zone. The facility is within a 7000 foot buffer zone around the Moapa Valley Water District wells, which are located northwest of the VHWWTF site. Well logs submitted to the Nevada Division of Water Resources for these wells report that water was encountered at 60 feet below surface; however static water levels were reported at 22 feet below surface, thereby indicating the aquifer is confined.

### **General:**

Valley Heights LLC owns and operates the VHWWTF, serving Valley Heights Subdivision in Logandale, Clark County Nevada. The VHWWTF serves up to 97 homes in the subdivision. The WWTF began operation during the fourth quarter of 2006. The site had been used as farmland, but had lain fallow for at least 20 years prior to construction of the subdivision.

Domestic wastewater from the subdivision is to be treated in a Mar-Wood extended aeration and aerobic digestion type package treatment plant. The facility is equipped with a manually cleaned bar screen in the headworks, to remove large inorganic material and debris. The standard Mar-Wood plant, designed to treat up to 0.0265 MGD of domestic wastewater to secondary treatment standards, is modified to provide denitrification of treated effluent. Treated effluent is discharged to four (4) Rapid Infiltration Basins (RIBs), each having bottom dimensions of 30 feet by 42 feet. Effluent may also be used for drip irrigation of landscape irrigation at the treatment plant site.

### **Receiving Water Characteristics:**

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Groundwater below the site is encountered at approximately 43 feet. This is believed to be shallow unconfined (water table) aquifer. Initial testing at the site for Rapid Infiltration Basin (RIB) design indicates groundwater flow direction in the water table aquifer is north by northeast. Groundwater samples from one of the three monitor wells indicated the following groundwater quality in the shallow aquifer:

| PARAMETER                     | ANALYTICAL RESULT |
|-------------------------------|-------------------|
| Chloride (mg/l)               | 220               |
| Sulfate (mg/l)                | 570               |
| Alkalinity (mg/l)             | 420               |
| Ammonia (mg/l)                | < 0.10            |
| Nitrate + Nitrite as N (mg/l) | 3.2               |
| Sulfide (mg/l)                | < 0.10            |

#### **Effluent Flow and Characteristics:**

During the period from 2002 to present, there has been no discharge of effluent. The plant construction was completed in late-2006, and is expected to begin accepting sewage in mid- to late- 2007:

#### **Proposed Effluent Limitations and Special Conditions:**

NDEP proposes the following permit limitations and monitoring requirements:

**Table 1 – Plant Discharge Limitations**

| PARAMETER                  |                         | DISCHARGE LIMITATIONS |               | MONITORING REQUIREMENTS |             |
|----------------------------|-------------------------|-----------------------|---------------|-------------------------|-------------|
|                            |                         | 30-Day Average        | Daily Maximum | Measurement Frequency   | Sample Type |
| Flow (MGD):                |                         |                       |               |                         |             |
| Outfall 001 (RIBs)         |                         | 0.0265                | ---           | Continuous              | Flow Meter  |
| Outfall 002 (Onsite Reuse) |                         | M & R                 | ---           | Daily                   | Calculate   |
| Influent                   | BOD <sub>5</sub> (mg/l) | M & R                 | ---           | Monthly                 | Composite   |
|                            | TSS (mg/l)              | M & R                 | ---           | Monthly                 | Composite   |
| Effluent (Outfall 001)     | BOD <sub>5</sub> (mg/l) | 30                    | 45            | Monthly                 | Composite   |
|                            | TSS (mg/l)              | 30                    | 45            | Monthly                 | Composite   |
|                            | Total Nitrogen (mg/l)   | 10                    | M & R         | Monthly                 | Discrete    |
|                            | Nitrate as N (mg/l)     | Monitor & Report      |               | Monthly                 | Discrete    |
|                            | pH (Standard Units)     | 6.0 to 9.0            |               | Monthly                 | Discrete    |

M & R = Monitor and Report

TSS = Total Suspended Solids

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Groundwater at the site shall be limited and monitored in the three monitoring wells MW1, MW2, and MW3 according to the following:

**Table 2: Groundwater Requirements**

| PARAMETER                         | PERMIT LIMITATION | MONITORING FREQUENCY |
|-----------------------------------|-------------------|----------------------|
| Depth to Groundwater (Feet)       | Monitor & Report  | Quarterly            |
| Groundwater Elevation (Feet AMSL) | Monitor & Report  | Quarterly            |
| Nitrate as N (mg/l)               | Monitor & Report  | Quarterly            |
| Total Nitrogen (mg/l)             | 10                | Quarterly            |
| Chlorides (mg/l)                  | Monitor & Report  | Quarterly            |
| Total Dissolved Solids (mg/l)     | Monitor & Report  | Quarterly            |

#### **Schedule of Compliance**

The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit

- a. **By January 1, 2008**, the Permittee shall submit an EMP, developed in accordance with Water Technical Sheet (WTS) - 1A “General design criteria for reclaimed water irrigation use” and WTS-1B “General design criteria for preparing an effluent management plan”, for review and approval
- b. **By January 1, 2008**, The Permittee shall submit an O & M Manual, developed in accordance with WTS-2 “Minimum Information Required for an Operation and Maintenance Manual for a Wastewater Treatment Plant”, for review and approval.

#### **Rationale for Permit Requirements**

The monitoring proposed by this permit is consistent with current facility practices and existing permit limitations for similar facilities, to protect groundwater quality.

Nitrification/Denitrification is effectively achieved during operation of the facility. NDEP intends to require that the effluent meet 30-day average Total Nitrogen limit of 10 mg/l, to ensure that any effluent migrating to the groundwater does not degrade water quality.

#### **Procedures for Public Comment:**

The Notice of the Division's intent to issue a permit authorizing the facility to discharge to groundwaters of the State of Nevada subject to the conditions contained within the permit is being sent to the **Moapa Valley Progress** and the **Las Vegas Review Journal** for publication. The notice is also being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the

Administrator. The deadline at the Division for the receipt of all comments pertaining to this public notice period is **5:00 PM, April 13, 2007**.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

### **Proposed Determination**

The Division has made the tentative determination to renew and modify the proposed permit for a period of five (5) years.

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